SPATIAL JOINT SEARCHER AND CHANNEL ESTIMATORS

BACKGROUND

[0001] This application is related to the following United States Patent applications, all simultaneously filed herewith: United States Patent Application Serial 10/717,813 (attorney docket 2380-776), entitled "Multi-Dimensional Joint Searcher And Channel Estimators"; United States Patent Application Serial 10/717,205 (attorney docket 2380-796), entitled "Temporal Joint Searcher And Channel Estimators", United States Patent Application Serial 10/717,212 (attorney docket 2380-797), entitled "Spatio-Temporal Joint Searcher And Channel Estimators", all of which are incorporated by reference herein.

[0002] FIELD OF THE INVENTION

[0003] The present invention pertains to wireless telecommunications, and particularly to apparatus and method for determining a channel estimate for use in reconstructing data symbols transmitted over a channel.

[0004] RELATED ART AND OTHER CONSIDERATIONS

[0005] A wireless telecommunications unit typically includes both a transmitter and receiver for communicating with other wireless telecommunications units over a communication link. For wireless communications, the communication link is typically over an air interface (e.g., radio frequency interface). As used herein, a "wireless telecommunications unit" with its "wireless telecommunications receiver" can be included in a network node (e.g., a radio access network node such as a base station node, also called Node-B) or a terminal. Such "terminals" include mobile terminals such as user equipment units (UEs), which have also been called mobile stations, and include by way of example mobile telephones ("cellular" telephones), laptops with mobile termination. Thus, terminals can be, for example, portable, pocket, hand-held,